Information Communications Technology (ICT) Innovations

Michigan's New Economy Partnerships:
Leveraging ICT Innovation for Economic Growth & Diversification

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June 2, 2010

B. Executive Summary

Necessity inspired an information communications technology (ICT) innovation in Michigan's approach to economic development. Entitled **New Economy Partnerships** (NEP), this program is delivering government transformation, workforce re-alignment and growth within the state's ICT sector.

What started out as a pilot project in Sept. 2008—in response to cabinet-level priorities and a struggling economy—evolved into a breakthrough program that was publicly launched in Sept. 2009. It began with a simple question: What if we tapped into the practical knowledge, established relationships and national brand of Michigan's IT department for economic development? The resounding answer: An internationally-covered success in the form of a commitment from IBM Corporation to site its first-ever North American global application delivery center in East Lansing, Michigan.

With existing staff and resources, the Michigan Department of Technology, Management & Budget teamed up with the state's economic development agency (Michigan Economic Development Corporation) and workforce development arm (Department of Energy, Labor & Economic Growth) to turn this single success into a full-fledged program. Together the group leveraged DTMB's **Innovation Adoption and Management Process** to align the project for action. New online team rooms were launched to share data and enable shared processes, Web and social networking sites were set up to connect stakeholders, and online tools were setup to recruit employers.

Immersion into the ICT community—via meetings across the state and nationally, through surveys as well as in-depth analysis of economic development and ICT trends—informed the effort. In less than two years, the program has created government efficiency through a unified team (across ICT, economic and workforce development) partnering with companies, higher education and the workforce.

The true value rests beyond government collaboration with dividends for Michigan citizens and businesses—jobs, revenue and better government service. Outcomes align with two of Michigan's three cabinet-level priorities: Creating jobs through diversification and creating a well-educated, highly-trained workforce. Benefits include:
- Securing commitments from ICT companies for over $23.7 million in investments and expected growth of nearly 5,000 new direct and spin-off jobs;
- Mitigating gaps in workforce needs through new IT boot camps and revamped curricula in partnership with higher education and local partners;
- Enabling ICT innovation, public/private partnerships (e.g., shared hosting center initiative), as well as citizen collaboration/engagement services.

While many are pursuing the ICT sector for economic growth, Michigan's innovative approach is breaking new ground for integrating policy, strategy and action. Beyond stand-alone tools/resources, NEP leverages the full-power of information communications technology for economic recovery and government transformation.

C. Description

Problem: In an effort to deal with its drawn-out structural economic challenges, the State of Michigan and its partners have taken exceptional steps, on several tracks and with multiple stakeholders. The results have been substantial, but uneven.

Emerging growth areas, such as the information and communications technology (ICT) sector, had changed dramatically and employers were not responding to standard incentives or traditional economic development strategies. There were workforce challenges too, with many knowledge-workers leaving the state and significant gaps between skills needed and skills acquired.

By mid 2008, Michigan had effectively addressed only some of the issues and made only partial and fragmented use of the available solutions, often in silos. Efforts to grow the ICT sector, for example, were splintered across regional and employer-led groups and were not connected to statewide strategy.

Solution: Seeking to address these structural issues, two of the three cabinet-level priorities were focused on the following: Creating jobs through diversification; and Creating a well-educated, highly trained workforce. All hands were officially called on deck, including the Michigan Department of Technology, Management & Budget (DTMB). A corresponding focus and priority was included in DTMB's six goal areas, including two goals: Foster partnerships across and beyond state government: Using technology as a change agent for cross-boundary innovation; and Drive innovative processes and technologies to transform Michigan's government service: Rethinking technology and processes and challenging the status quo.

Contributing to economic and workforce development in the ICT sector was a natural fit for DTMB. Although it was outside of the department's traditional scope, the department was already "in-network" with Michigan's ICT vendor community. It could also relate to the employer community and ICT workforce as a fellow employer and practitioner. As with many IT projects, the effort began as a pilot. DTMB's director/state CIO championed the effort and committed a senior research analyst and a staffer with grassroots and economic development experience to support it.

By Sept. 2008, a challenge had been issued to the state's vendor community: Michigan wanted in on ICT economic development. And it was using the depth, breadth and strength of its nationally-known IT department to make it happen. Right out of the gate the response was clear. By pairing up DTMB with the economic development tools of the Michigan Economic Development Corporation (MEDC) and the workforce development know-how of the Department of Energy, Labor & Economic Growth (DELEG)—as well as critical partners in higher education and the employer-led alliances—the State was able to land a major commitment from IBM Corporation.

The decision by IBM to locate its first-ever global application development center in East Lansing, Michigan—as well as the unwavering support and partnerships developed

among key players like Michigan State University, MEDC, DELEG, and DTMB in recruiting IBM—was exactly the kind of validation that this exploratory effort initially needed. While the IBM development opportunity was celebrated for generating 1,500 direct and indirect jobs over the next five years—perhaps even more important was the seminal value it had in launching Michigan's formalized and aggressive pursuit of ICT sector economic development. This new effort was moving forward, and there was a full-blown commitment from all partners. Dubbed **New Economy Partnerships** (NEP), this ICT-sector effort benefited from ICT innovation both in formation and deployment.

DTMB's **Innovation Adoption and Management Process**, including a technology and solution trend "push" and business context "pull," shaped the approach. The process steps were based on Gartner's Scope, Track, Rank, Evaluate, Evangelize and Transfer (STREET) model and were carried out and institutionalized jointly with state, regional and corporate ICT, economic and workforce development partners. NEP committees inventoried resources, networks, opportunities and shared processes; developed short- and long-term strategies; identified key metrics for evaluation; and publicly launched the effort in September 2009. An overview is provided below.

Scope (enterprise shared solutions, economic and workforce development):
Through the technology Push/Pull, NEP utilized trend analyses and stakeholder, partner and economic development input, including communication relationships and tools to define its focus. In shaping the strategy, an inventory of existing efforts and emerging technology opportunities (Forrester) was completed. Among these:
- **On-shoring trend:** Michigan positioned its lower-cost, highly-connected infrastructure to secure new jobs.
- **Local and regional ICT economic development efforts:** Efforts—ranging from the Michigan Information Security Network to the West Michigan CIO Council— were connected and united through outreach and strategy.
- **The role of IT transitioning from back-office to front-line strategy:** Michigan used its public sector IT organization as a practitioner to relate to the businesses and stimulate growth in the private sector.

Track (technologies, solutions, industries and workforce): Michigan analyzed industrial and workforce data as well as smart computing opportunities to develop regional clusters, target solutions and eliminate infrastructure barriers.
- **Science and technology rankings:** Leveraging its science and technology mid-20s ranking and new economy mid-teens rankings (e.g., knowledge economy, digital economy) (Milken) Michigan refocused economic development on ICT.
- **Major federal ICT investments:** Michigan led efforts to obtain significant American Recovery and Reinvestment Act (ARRA) dollars for broadband infrastructure, deployment and adoption.

Rank (Preliminary NEP targets): Specific technology growth opportunities were identified and evaluated, leveraging Forrester's Smart Computing principles:
- **Awareness technologies (new):** RFD, sensors, pattern recognition, data mining and other tools to capture data on identity, status, condition and location.

- **Analysis and analytics tools (next generation):** Using business intelligence and analytic tools determine differentials that should be acted on or ignored.
- **Alternatives expansion (existing):** Using rules engines and workflow, including human review products.

Using this information, NEP targeted **five focus areas** within ICT: Advanced Manufacturing, Digital Media, Health IT, Infrastructure and Water. Nine geographic regions were also developed based upon traditional economic development lines as well as existing ICT infrastructure placement and known future growth opportunities.

Evaluate (Industry and partner assisted assessment of targets): In-depth research and evaluation took place, as follows:
- 15 information gathering sessions across the state, with key partners.
- Group presentations reaching 1,400 Michigan IT prospects and the workforce.
- National and international program pitches by State CIO to 700 prospects in locations ranging from Chicago to Dubai.
- Survey research from partner groups like the Capital Area IT Council (employer-led alliance) and the Michigan Coalition for Health IT. NEP is also launching a comprehensive survey of all IT companies in the state of Michigan on next-level sector development efforts.

Evangelize (Communications program): Tactics derived from the plan included:
- **Online team rooms** featuring shared, interactive prospect lists and workflow.
- **Joint public announcement** in Sept. 2009 at the Detroit CIO Executive Summit.
- **ICT-focused Web site** (www.michigan.gov/nep) in Dec. 2009. Facebook, Twitter and a ListServ followed. Monthly Web visits have climbed from 89 visits to 375, and page views have risen from 413 to 1,230 monthly. Specific technology tools:
  - **Geospatial mapping** of current ICT assets (e.g., college graduates, broadband access, existing companies).
  - **Multi media ads and podcasts** with *Pure Michigan* media campaign.
  - **Online Employer Toolkit** streamlined access to Michigan Business One Stop portal, License Verification Tool, Employee Child Support Payment Tool, Resource Navigator Tool, MEDC, DELEG, the patent electronic filing system, and quality of life information.
  - **RSS feeds** on current IT jobs postings from the Michigan Talent Bank.

Transfer (Ongoing process): In deploying the effort, governance took the shape of an executive steering committee led by DTMB with four, matrix-style working groups:
- **Grow IT**: Leading ICT economic development and developing/implementing investment attraction strategies and ICT-specific incentive packages.
- **Work IT**: Aligning partnerships and action to boost development, attraction and retention of a capable, qualified IT workforce.
- **Advance IT**: Identifying opportunities for innovation and growth and defining key industry- and geographic-specific clusters.
- **Communicate IT**: Engaging end-users and strategically marketing the effort.

NEP project costs have been minimal, beginning with 1.5 FTEs. Staff in partner agencies repackaged and used existing incentives and tools and publicized current programs and initiatives, with DTMB maintaining oversight of the program.

D. Significance

Policies and Strategies: Over the next decade, business and government investment in technology is expected to grow at twice the rate of the overall economy (Forrester). Through NEP—and systematic attraction of leading ICT companies—Michigan is strategically positioning itself to fully leverage this Smart Computing opportunity. It is placing knowledge workers and leading innovators in-network with each other and it is transforming government and improving service to citizens:

- **Economic Development Role:** NEP created a new role for the IT department within economic development/governance.
- **ARRA Broadband Funding & Adoption:** NEP supported the planned coordination and collaboration to obtain broadband dollars. In the first round, Michigan received six awards, including 955 miles of backbone infrastructure, 84 public computing centers, sustainable broadband adoption, and mapping. Thus far, $53 million in grants and loans have been awarded, placing Michigan 13th in the total funding received under the Broadband Technology Opportunities Program (BTOP) and Broadband Initiatives Program (BIP) combined.
- **Social Networking Services:** The partnership recruited a leading social networking firm (INgage Networks) that is generating new partnerships for adoption of this solution set and utilizing it to advance economic development.
- **Public/Private Hosting Center Initiative:** NEP is leading an effort to develop a hosting center for the State and the private sector that will be instrumental in achieving DTMB's goal of a shared government cloud.
- **Health IT Partnership:** With DELEG, the partnership is establishing a statewide, employer-led health IT skills alliance to align employer needs with curricula. This is also a focus area for job creation and technology innovation.
- **Geospatial Mapping:** GIS mapping is used for NEP programmatic decision-making as well as recruitment of ICT firms.

As described in the solution section, this effort is also aligned closely with key priorities of the State of Michigan's cabinet/executive office and DTMB departmental priorities.

Processes: DTMB's *ICT Innovation Adoption and Management Process* has continued to evolve and the effort is gaining more momentum, regardless of traditional turf/ ownership issues. This systematic process has helped NEP avoid personality-driven decisions that often stymie innovation.

Operations: At the core of NEP is coordinated strategy, one-stop action and ICT employer-driven tools. In addition to DTMB, key beneficiaries (and partners) include the MEDC and DELEG. Additional stakeholders include: other state agencies/ programs, local/regional ED groups; employer-led groups, including health IT and security; and higher education, including the University Research Corridor, other universities and

community colleges, as well as innovation centers. NEP best practice operations (as described above) include: tiered internal and external strategies, cluster analysis and region targeting.

E. Benefits of the Program

Michigan's approach to ICT economic development is a leading example of how pairing innovation with IT expertise can create jobs and infrastructure as well as better government. It provides ICT companies with a single point of contact for economic and workforce development. This interagency, public/private coordination has enhanced the effectiveness of recruitment efforts and increased the number of high-performance workers/workplaces in Michigan. Impact on citizens and businesses is three-fold:

1. **Jobs and Investment: ICT Sector Growth with NEP**

Firm	City	Direct &Spin-Off Jobs (Committed & Projected)	Investments
IBM Corporation	East Lansing	1,500	
Systems in Motion	Pittsfield Twp.	1,996	$15,700,000
INgage Networks	East Lansing	44	
Ciber, Inc.	Southfield	1,288	$8,000,000
	Totals	**4,828**	**$23,700,000**

   Other major high-tech job commitments announced by MEDC during this time period further reinforce an upward trend within Michigan's ICT sector. They include: General Electric (1,200 jobs), Tata Consultancy Services (1,250 jobs), Strategic Staffing Solutions (802 jobs), GalaxE. Solutions, Inc. (500 jobs).

2. **Workforce Development:** NEP is growing the number of science, technology and knowledge workers employed in Michigan and improving performance in priority public service areas. It is connecting partners to build IT boot camps, certificates and four-year curricula to meet employer and worker needs. And leveraging tuition free programs through No Worker Left Behind to support displaced workers.

3. **ICT Sector Innovation & Better Government:** Application of ICT resources in is enhancing public access. Broadband and social technologies are boosting connectivity and communication. Expanded online access is improving online access to government resources and participation/civic engagement. Advanced ICT resources are improving services, such as access to education, healthcare and health information, and emergency communication systems, among others.

While many are actively pursuing the ICT sector as an area for economic growth, the Michigan NEP approach is breaking new ground for integrating policy, strategy and action. Beyond any stand-alone tool or resource, this innovative collaboration, process and toolset leverage the full-power of information communications technology for economic recovery and government transformation.